

ABSTRACT OF THE DISCLOSURE

Frame synchronization is quickly established to acquire an RF channel in a short time. Numerically controlled oscillators 1-1 to 1-3, complex calculation circuits 2-1 to 2-3, band limit filters 3-1 to 3-3, a selector 7, a phase error detection circuit 9, a loop filter 10, and an AFC circuit 11 compose a carrier regeneration loop for removing the frequency error of the carrier included in an in-phase component I and a quadrant component Q of the baseband signal input to the complex calculation circuits 2-1 to 2-3. A timing generator 6 detects which of frame synchronization pattern detection circuits 5-1 to 5-3 has detected a frame synchronization pattern, provides the selector 7 with a selection signal corresponding to the decision result, and sends a switch signal to the AFC circuit 11. Thereafter, the carrier for removing the frequency error included in the baseband signal is regenerated to acquire an RF channel in a short time.